



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,936	08/22/2003	Samuel D. Naffziger	200210023-1	3016
22879	7590	07/15/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			SHINGLETON, MICHAEL B	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/646,936	Applicant(s) NAFFZIGER ET AL.	
	Examiner Michael B. Shingleton	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-27, 30-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-11, 30 and 32 is/are allowed.
- 6) ☒ Claim(s) 12-17, 21-24, 26 and 31 is/are rejected.
- 7) ☒ Claim(s) 18-20, 25, and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

The terminal disclaimer of 6-17-2005 has been noted and recorded.

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-15 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 31 is recited as being dependent upon cancelled claim 29. The examiner thought that applicant could have meant that claim 31 was to be dependent upon claim 30 instead of cancelled claim 29, but an examination of claim 31 reveals that claim 31 refers to "the output signal". Claim 30 only recites a control signal and a clock signal and either one could be referred as being an "output". Thus, the scope of the claim is indefinite for the examiner cannot tell for sure whether or not applicant meant for claim 31 to be dependent upon claim 30 or not, and even if applicant meant for claim 31 to be dependent upon claim 30 it cannot be determined which of the two signals of claim 30 "the output signal" refers to. Claim 12 is dependent upon cancelled claim 1. The examiner thought that applicant could have meant claim 2 instead, however, an examination of claim 12 reveals that many of the same things in claims 2 and 12 appear to be duplicates. For example claim 2 claims "a waveform control" and claim 12 claims "a waveform control". There does not appear to be support in the original disclosure for two waveform controllers or "waveform controls". Thus the examiner cannot determine with any reasonable certainty what claim applicant meant claim 12 is to be dependent upon. Therefore the scope of claim 12 and thus those claims dependent thereon, i.e. claims 13-15 are indefinite.

#### *Claim Objections*

Claim 32 is objected to because of the following informalities: Claim 32 is recited as being dependent upon cancelled claim 28. It is apparent to the examiner that applicant must have meant that the claim 32 dependency should have been claim 30 instead of the cancelled claim 28. Therefore for

examining purposes the dependency of claim 32 is taken to be that of 30 instead of cancelled claim 28. Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16, 17, 21, 22 and 23 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mizokawa 4,170,715 (Mizokawa).

Figures 2 and 3 and the relevant text of Mizokawa discloses a clock generator having a driver 5 that provides an output clock signal "c" that is based on at least one control signal NRZ "a", SPM "b" and the signal applied at the output of device 24. The examiner must give the broadest reasonable interpretation to the claims consistent with the specification (See MPEP 904.01 and 2111). The device of Mizokawa in producing a square wave like that shown in Figure 2 is fully capable as operating as a clock. A clock is in its simplest form merely a square wave generator. The waveform "c" is square wave. This then qualifies Mizokawa's circuit as a clock. A waveform controller is formed by the unshown device that produces the NRZ "a" signal, the SPM device that produces the SPM "b" signal and the device 24 that produces a control signal at its output. During the first operating mode the waveform controller of Mizokawa controls the driver 5 to provide the output clock signal having normally high and low levels. The first operating mode being defined by when the NRZ data "a" is at zero and the SPM data "b" is don't care i.e. either a 1 or a zero (See Figure 3). During the second operating mode the waveform controller or Mizokawa controls the driver 5 to provide temporarily the output signal at an intermediate level between the normally high and low levels. The second operating mode being defined by when the NRZ data "a" is a one and the SPM data "b" is don't care. As noted by Figure 3 of Mizokawa NRZ is only at the "one" level on a temporarily basis and thus it goes without saying that output signal is temporarily at an intermediate level between the normally high and low levels in Mizokawa. Note that when NRZ is a "one" then the transistor T conducts thus forming a voltage divider with the winding 5a wherein the node of the voltage divider, i.e. the center node of the winding 5a causes a reduced voltage at this node which in turn provides the clock signal at the intermediate level during this second operating mode as indicated in Figure 3 of Mizokawa. The transistor T being a bipolar conducts main current only in a single direction and thus meets the limitation of being a device that temporarily "diode connects" a

device of the driver i.e. the winding 5a to enable the driver to provide the clock signal at the intermediate level during the second operating mode. Applicant has not provided a specific definition for the term "self-biases" and as such the examiner must give the broadest reasonable interpretation to this term consistent with the specification. Thus a reasonable interpretation would be that the clock signal self-biases to the intermediate based on the relative characteristics of the driver, i.e. the voltage divider that is formed by the winding 5a and at least the transistor T.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizokawa 4,170,715 (Mizokawa).

All the reasoning above as applied in the above 35 USC 102 rejection and the following. In the waveform controller circuitry of Mizokawa there must be a delay network because the SPM data and the NRZ data have preset periods as is clearly apparent in Figure 3 of Mizokawa. However, it conventionally known to utilize a delay network so as to form a preset period in a square wave for example. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized a delay network to set the period for the control waveforms in Mizokawa wherein it is noted that the period of the control waveforms control the duration of the clock signal when it is at an intermediate level, because as the Mizokawa is silent on the device that causes the delay, i.e. sets the period, one of ordinary skill in the art would have been motivated to use any art-recognized equivalent delay device to set the period such as a conventional delay network. With respect to claim 26, Mizokawa is silent on the circuit being "integrated". Mizokawa clearly shows at least one circuit 9, 10, etc. that is driven by the output "c" of the clock generator. Integration is well known to be advantageous so as to make the circuit smaller, cheaper and more durable. Thus it would have been obvious to integrate at least part of the circuitry of Mizokawa thereby forming "an integrated" circuit so as to provide for a more compact structure, a cheaper (less expensive) structure and a more durable structure. One of ordinary skill would have been motivated to make the combination so as to provide a smaller, cheaper and more durable structure. These are well known advantages to integrating a circuit.

Art Unit: 2817

Claims 18-20, 25 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-11, 30 and 32 are allowable over the prior art of record.

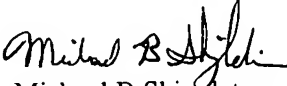
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is (571) 272-1770.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal, can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 and after July 15, 2005 the fax number will be 571-273-8300. Note that old fax number (703-872-9306) will be service until September 15, 2005.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MBS

June 27, 2005

  
Michael B Shingleton  
Primary Examiner  
Group Art Unit 2817